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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,882	08/27/2003	Hiroyuki Bekki	388-031637	4883

7590 06/03/2004

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EXAMINER

HOOK, JAMES F

ART UNIT	PAPER NUMBER
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3752

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/648,882

Applicant(s)

BEKKI ET AL.

Examiner

James F. Hook

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4-5-04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Drawings*

Figures 13 and 14 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

The disclosure is objected to because of the following informalities: on page 9 of the specification there are two Brief descriptions of figure 13 and no brief description of figure 14 as required.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Hollinshead. The patent to Hollinshead discloses the recited flexible pipe joint comprising a first pipe member 64 provided with a partially spherical outer circumferential surface that protrudes outward, a second pipe member generally shown near 60 that is provided with a partially spherical inner surface that can slide along the partially spherical outer circumferential surface as the two are moved relative to one another creating a bending motion as seen in figure 4, wherein a sleeve 50 made of a synthetic resin is inserted and fitted in a state of contact bridging the inner circumferential surfaces of the two pipe members at specific locations as seen in figure 3, the sleeve has a length that covers the cavity portion that opens inward in a radial direction at a location where the two pipe members are joined together, and being elastically deformed while substantially maintaining its circular shape when following the flexure of the two pipe members as seen in figure 5, the sleeve length extends beyond the intersection between a virtually extended surface of the partially spherical outer surface and the inner circumferential surface of the first pipe member, a fixing means is formed by the insert 110 which prevents motion of one end of the tube relative to the first pipe member which also acts as a reinforcement core that suppresses deformation of the sleeve at that location inherently.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Dotti. The patent to Dotti discloses the recited flexible pipe joint comprising a first pipe member 24 provided with a partially spherical outer circumferential surface 46 that protrudes outward, a second pipe member 12 that is provided with a partially spherical

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inner surface that can slide along the partially spherical outer circumferential surface as the two are moved relative to one another, wherein a sleeve 52 made of an elastomer which is known in the art to be the equivalent of a synthetic resin is inserted and fitted in a state of contact bridging the inner circumferential surfaces of the two pipe members at specific locations as seen in figure 5, the sleeve has a length that covers the cavity portion that opens inward in a radial direction at a location where the two pipe members are joined together, and being elastically deformed while substantially maintaining its circular shape when following the flexure of the two pipe members as seen in figure 5, the sleeve length extends beyond the intersection between a virtually extended surface of the partially spherical outer surface and the inner circumferential surface of the first pipe member.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dotti in view of Kuo. The patent to Dotti discloses all of the recited structure with the exception of forming the partially spherical outer circumferential surface as a ring installed in the first pipe member. It is noted however that Dotti does show the ball member to be a separate addition to the pipe 24. The patent to Kuo discloses that it's old and well known to form partially spherical joints with a partially spherical ring structure 3

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provided on the end of a pipe section and within a partially spherical inner surface to allow the joint to rotate as well as move axially for minor changes in distances between ends of the final structure. It should be noted that the structure in Kuo is very similar to that of Dotti including the extra pieces used to form the final socket structure, thereby teaching the same type of joint structure. It would have been obvious to one skilled in the art to modify the outer spherical member of Dotti by substituting a ring shaped partially spherical member over the pipe section to allow the joint to not only rotate but expand in the axial direction as suggested by Kuo as such would make the joint more versatile.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dotti in view of Miller. The patent to Dotti discloses all of the recited structure with the exception of providing a tapered surface on one end of the sleeve. The patent to Miller discloses a sleeve 12 provided in a flexible joint which allows motion in the joint and the sleeve acts to allow flow there through while the joint moves where one end of the sleeve is provided with a tapered end changing in diameter to allow for smoother flow into the sleeve. It would have been obvious to one skilled in the art to modify the sleeve in Dotti by providing one end with a tapered changing diameter to allow for smoother flow into the sleeve as suggested by Miller as such will improve its efficiency and thereby reduce costs.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hollinshead in view of Christianson. The patent to Hollinshead discloses all of the recited structure with the exception of the thickness of the sleeve and the use of

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polyethylene as the synthetic resin. The patent to Christianson discloses that it is old and well known to form a similar partially spherical socket and outer surface connection between two pipe members 10 and provide a tube 20 therein to span across the intersection of the engaged partially spherical members where the tube can be formed of synthetic resin such as polyethylene. It would have been obvious to one skilled in the art to modify the synthetic material used to form the sleeve in Hollinshead to be made of any material including polyethylene as such is a known material used in such applications as suggested by Christianson and such is a known cheaper material to manufacture as opposed to the nylon reinforced PVC used in Hollinshead which is a more complex material. Forming the sleeve of any thickness is considered an obvious choice of mechanical expedients where it would only require routine skill in the art to modify the sleeve to be of any useful thickness as such would only require routine experimentation to arrive at optimum values.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dotti.

The patent to Dotti discloses all of the recited structure with the exception of the thickness of the sleeve and the use of polyethylene as the synthetic resin. The use of any type of elastomer or resin is considered to be merely a choice of mechanical expedients as is forming the sleeve of any thickness, where it would only require routine skill in the art to modify the sleeve to be of any useful thickness as such would only require routine experimentation to arrive at optimum values. It would have been obvious to one skilled in the art to modify the thickness of the sleeve and the material of the sleeve in Dotti to be of any useful thickness and known material including

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polyethylene as such only requires routine experimentation to arrive at optimum values as such are merely choices of mechanical expedients.

***Allowable Subject Matter***

Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Wakeman, Steed, Press, Scoboria, Pava, Yano, Hamamoto, Bonn, Sakai, and Sato disclosing state of the art flexible pipe joints.

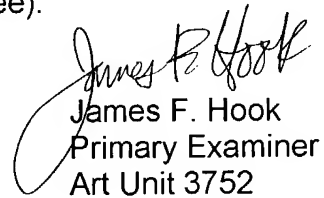
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (703) 308-2913. The examiner can normally be reached on Monday to Wednesday, work at home Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (703) 308-2087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James F. Hook  
Primary Examiner  
Art Unit 3752

JFH